

**TILAK MAHARASHTRA VIDYAPEETH, PUNE**  
**MASTER OF COMPUTER APPLICATIONS**  
**EXAMINATION : DECEMBER - 2023**  
**SEMESTER – III**

**Sub : Data Mining & KDD (MCA- 300-22)**

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**Date :12/12/2023**

**Total Marks : 60**

**Time: 10.00 am To 12.30 pm**

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**Instruction:**

1. All questions are compulsory unless and otherwise stated.
  2. Bold figures to the right of every question are the maximum marks for that question.
  3. Candidates are advised to attempt questions in order.
  4. Answers written illegibly are likely to be marked zero.
  5. Use of scientific calculators, Log tables, Mollier Charts is allowed.
  6. Draw neat and labelled diagram wherever necessary.
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**Q. 1. Answer the following in 2 - 3 lines. (Any 5)**

**(10)**

1. Define frequent item sets.
2. Define support and confidence.
3. Define data extraction.
4. Define data selection.
5. List types of data warehouse.
6. Define OLAP.
7. List types of cluster systems.

**Q. 2. Answer the following in short. (Any 4)**

**(20)**

1. Explain how does classification works?
2. Describe the benefits of clustered systems.
3. Write a short note on multidimensional data cube
4. Distinguish between classification and prediction
5. Explain Agglomerative Hierarchical Clustering
6. Explain market basket analysis.

**Q. 3. Answer the following in detail. (Any 3)**

**(30)**

1. Briefly outline the major steps in decision tree classification.
  2. Explain the impact of data warehousing on business intelligence?
  3. Describe the role of data warehousing in data mining?
  4. Describe Apriori algorithm with benefits and limitations.
  5. Describe Naive Bayes Algorithm.
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